



# Gaming as a Subscription

Analysis of Portuguese Gaming consumers  
perspectives on access-based gaming  
subscriptions

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## Abstract

Gaming subscriptions have grown immensely since the gaming industry became more digital, and access-based subscriptions are no exception. With the entrance and rebranding of companies in the Portuguese gaming subscription market, it is now essential to study the consumers' perspectives. This dissertation aims to do just that by looking at drivers, barriers, and willingness to pay for these services. First, a literature review was created to discover the initial hypothesis, followed by ten individual interviews to seek if they were confirmed and to discover potential new ones. Subsequently, an online survey was created that gathered 225 valid answers and confirmed some of the hypotheses thought beforehand. Findings showed that the main drivers for the service are the number of games, service quality and usage frequency, while the main barrier are the division of games between subscriptions. Furthermore, the average willingness to pay for these services is 7,80 euros per month, higher than some currently available services and more than the average spent in gaming in Europe. Differences in opinions were also found between who has the subscription and who does not. To conclude, strategies were created and thought to improve the adoption of access-based gaming subscriptions and the competitiveness of players in the market.

Keywords: subscription; access-based service; gaming subscription; Portuguese gamers

Title: Gaming as a Subscription - Analysis of Portuguese Gaming consumers perspectives on access-based gaming subscriptions

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## Abstrato

Subscrições de jogos têm crescido substancialmente desde que a indústria de jogos se tornou mais digital, e as subscrições de acesso de jogos não são a exceção. Com a entrada e *rebranding* de empresas no mercado português de subscrições de jogos, é essencial estudar as perspetivas dos consumidores. Esta dissertação pretende estudar as mesmas a partir da identificação de razões, barreiras e disposições para pagar por estes serviços. Primeiramente, foi realizada uma revisão de literatura para descobrir as hipóteses iniciais, seguida de dez entrevistas para confirmar as mesmas e, potencialmente, descobrir novas. Depois, um questionário online foi criado que gerou 225 respostas válidas e que confirmou algumas das hipóteses previamente pensadas. Resultados mostram que as principais razões para subscrever são o número de jogos, qualidade do serviço e frequência de uso, enquanto a principal barreira é a divisão dos jogos pelas subscrições. Além disto, a média de disposição para pagar é de 7,80 euros por mês, o que é mais do cobrado por alguns dos serviços disponíveis e da média gasta em jogos na Europa. Também foram encontradas diferenças de opinião entre quem tem subscrição e quem não tem. Para concluir, foram criadas e pensadas estratégias para melhorar a adoção de subscrições de acesso de jogos e a competitividade das empresas neste mercado.

Palavras-chave: Subscrições; Serviço de acesso; Subscrições em jogos; *Gamers* portugueses

Título: Jogar por subscrição – Análise das perspetivas do consumidor gamer português relativo a subscrições de acesso de jogos

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## 1. Introduction

### 1.1. Background

Video games first appeared around the 1950s with simple and basic games (Ivory, 2016). However, with the evolution of technology, games started to become more digital and steer away from CD's (Trefis Team, 2012). Since then, they have evolved into different genres and platforms worldwide and are expected to generate 175.8 billion dollars with 2.96 billion gamers in 2021 (Wijman, 2021).

The expansion of the digital gaming industry also allowed new services to appear, specifically subscriptions. The first subscriptions that were recorded started in the 1500s with map publishers (Warrillow, 2015). Nowadays, different companies use subscriptions as their product, and there are even different types of subscriptions (Campbell, 2020).

A few of these companies are gaming ones, and in this industry, access-based gaming subscriptions appeared first in the '80s, yet, without much success. However, they have started to gain more popularity in recent years because of the more considerable access to the internet (Bashir, 2021) and are even predicted to value 11 billion dollars in 2025 (Juniper Research, 2020).

Currently, four companies have these subscriptions available within the Portuguese market for the computer, and they are Electronic Arts (with EA Play); Xbox (with Xbox Game Pass); PlayStation (with PlayStation Now); Ubisoft (with Ubisoft+), each with its own set of games and characteristics.

Since these are relatively new services available to the Portuguese gaming consumer, there is not much research on the topic. Hence, it leaves to wonder, what do Portuguese gaming consumers value on access-based gaming subscriptions?

### 1.2. Problem Statement and Research questions

This dissertation aims to assess the interest of Portuguese consumers in owning games through subscriptions services that already exist in the market. With this research, it will be possible to know why a consumer would want to acquire one of these services, what advantages and barriers they see in the service and how much they are willing to pay for it.

Because of this, the research questions that will be studied are the following:

Q1: What are the main drivers in gaming subscription services?

Q2: What are the main barriers to the consumers acquiring these services?

Q3: How much are consumers willing to pay for gaming subscription services?

### 1.3. Managerial and Academic Relevance

From a managerial point of view, this research is essential for gaming companies that either already have an access-based gaming subscription or plan to create one of these subscriptions in the near future. This research will demonstrate companies' potential new insights regarding what consumers see as crucial in these subscriptions and what steers them away from the product. It also shows how much they are willing to spend for these subscriptions, which can help companies become more competitive and attract more consumers to them instead of the competition.

On the other hand, from a more academic point of view, this study adds new research on subscriptions and access-based services, focused more on gaming companies and in the Portuguese market, for which no studies have been found.

### 1.4. Dissertation Structure

This thesis is divided into six sections:

- The first is an "Introduction", where some initial information is given about the topic and describes what will be studied and why it is important. It is followed by the "Market Analysis", where this research goes in-depth regarding what already exists in gaming and gaming subscriptions, what brands have these services, and their characteristics. The third one, "Literature review", focuses on previous studies on the subscription model and access-based services, which helped create the hypothesis. Next is the "Methodology", which explains how the research will be conducted and then analyzed, followed by the "Qualitative and Quantitative Results", where all the analysis and results are presented from each study done. Finally, the "Conclusions" are made to finish the dissertation and to give a scope of potential future research that could be made on this topic.

## 2. Market Analysis

### 2.1. Video Game Industry

According to Ivory (2016), video games appeared around the 1950s. However, the actual game and person that started is not fully agreed to, as different people created different programs that either were a game but was not commercialized or resembled a game but was not quite one. On the other hand, there was a game available to a larger audience, and that was “Spacewar!” which was developed by three students from the Massachusetts Institute of Technology in 1962. This game is also considered the first one by some. After these games, more started to appear. Eventually, games started to become more digital and to steer away from physical copies like CD’s (Trefis Team, 2012).

Currently, it is a market expected to generate 175.8 billion dollars in 2021 (Wijman, 2021), a reduction of 1,1% when compared with 2020, mainly because of Covid-19. Alternatively, in terms of the number of gamers worldwide, it increased 5,3% compared with the previous year to a total expected of 2.96 billion. It is essential to mention that, according to this study, the biggest market is the Asia-Pacific one having 50% of the market value and 55% of the total number of gamers.

When looking at the previous year’s report, Covid-19 helped increase the gaming industry, as they state, “A significant driver of this year’s growth is a heightened interest in gaming as a result of Covid-19 lockdown measures.” (Wijman, 2020). It is also possible to see this in Barr & Copeland-Stewart (2021), where it is reported that “(...) 71,3% of respondents reported that the time they spend playing video games had changed during the Covid-19 pandemic, while 61,3% stated that the types of games they play had changed”. However, it did not last long, and the gaming industry started to suffer since there was a shortage of components and some game titles that were being launched had to be postponed. This was especially true for console and PC Gaming.

Looking more specifically towards the European market, it is predicted to account for 18% of the total market value in 2021, being at 31.5 billion dollars, a reduction of 5.6% compared to last year and has 14% of the total number of gamers, accounting for 408 million, an increase of 4% when compared with last year (Wijman, 2021). This would mean that on average, each European consumer would spend around 77,21 dollars (approx. 66,34 euros) during the year on games, which is equivalent to 6,43 dollars a month (approx. 5,52 euros).

Furthermore, there are some forecasts of 2021 regarding the Portuguese gaming market. It is projected to reach 118 million euros and grow by 7.39% until 2026, reaching 168 million euros (It is not included the sales that are made in physical stores) (Statista, 2021). It is also projected that each user will spend 40.65 euros (3.39 euros a month) in the video game segment in 2021 and estimated that by 2025 there will be 3.3 million users of video games in the Portuguese market (Statista, 2021). On other sources, it was estimated in 2019 that the Portuguese gaming market was worth 250 million euros (Rodrigues, 2019); however, it is unclear what aspects of gaming are considered in this estimate.

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**H3.1:** Portuguese gaming consumers are **willing to spend less** than the average spent on games in Portugal per month (**3,39 euros**) to buy gaming subscriptions

**H3.2:** Portuguese gaming consumers are **willing to spend between** the average spent on games in Portugal and Europe per month (**3,39 euros to 5,52 euros**) to buy gaming subscriptions

**H3.3:** Portuguese gaming consumers are **willing to spend more** than the average spent on Europe in games per month (**5,52 euros**) to buy gaming subscriptions

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It is also essential to address some misconceptions around what is perceived as gamers and the people who play games. As we can see from Stone (2021), “The traditional gamer stereotype has many characteristic traits, including but not limited to age (adolescent), race (white), gender identity (cisgendered and male), sexual orientation (heterosexual), social aptitude (socially awkward and isolated), physical traits (overweight and unattractive), achievement (professionally unsuccessful or idle), and/or motivation (unmotivated)”. However, this is not the case anymore. As we can see in the Entertainment Software Association (2021), in the United States, 45% of game players identify as female, and the average video game player is 31 years old, with 42% of them being over 34 years old. It is also possible to see from Pearce (2008) that over 40-year-old players are the ones contributing to the growing sector of casual games and that adults are the ones that tend to play every day online games and to stay late playing with 28% of the survey respondents stating they play between 20 to 40 hours a week and 18% from 15 to 19 hours a week. Regarding the gamers race, it is mentioned that 73% is white, meaning that part of the stereotype can still be seen as accurate (Entertainment Software Association, 2021).

There are also some differences between the so-called “hardcore” gamers and the “casual” gamers. The first are considered players that tend to work on more male-oriented and emotionally negative games, while the second focus on more positive and easy to learn games (Stone, 2021). We can also see that women usually play more “casual” games (Ćwil & Howe, 2020), confirming Stone’s statement.

In Ćwil & Howe (2020), we can also see that there can be differences in the gaming culture between different cultures. In this case, we can see that gamers and non-gamers play the same type of games in Poland, while this does not occur in the US. It is also visible that men identify more as gamers than women in both countries.

As we have already seen, gamers are different, and they also play for different reasons. According to a study made by Nielsen (2020), the main reason to play video games during Covid-19 were not to be bored (56%) and “escape the real world” (45%), but some also said that they played to socialize with friends and family (29%) and with strangers (26%).

After knowing how much the market values and how many gamers there are, it is also essential to know in which platform they are gaming. According to Wijman (2021), the biggest market is the mobile market, having a total of 79 billion dollars on smartphones (which is 45% of the total global market), an increase of 4.7% compared to the previous year and a total of 11.6 billion dollars in tablets (which is 7% of the total global market), and increased 2% compared to the previous year. This is also true for the Portuguese market, as is confirmed by Statista, where it is said that “The largest segment is Mobile Games with a market volume of €52m in 2021” (Statista, 2021). On the other hand, it is possible to see from Pearce (2008) that computers are the preferred platform for over 40-year-old players, with 98% of the survey answers stating PC as their central gaming system, because “(...) console and portable gaming devices in the household are considered primarily the children’s domain” (Pearce, 2008).

Additionally, it is relevant to see how users acquire games to play. They have different methods, which can be, buying the game through the internet (which can be done by a general gaming platform, like Steam, by a publishers gaming platform, like Uplay, or, in some cases, directly downloading the game from a website), buying in-stores a physical copy, buying a game second-hand, receiving the game for free (there are free games on the mobile segment for example) or, as is the research of this dissertation, through subscription-based services. From Pearce (2018), we can see how over 40-year-old gamers buy their games, with almost 60%

buying in physical stores and almost 50% saying they buy them through the internet and “Only about 5% reported playing games through subscription services (...)”.

However, observing the company’s side, in-game subscriptions are starting to become more popular and an alternative source of income, as is stated by Bernevega & Gekker (2021), and the gaming subscriptions services are an upscale version of this by, instead of giving access to more content inside a game, they give access to different games.

It is reported by Newzoo (2021) that the “(...) engagement and revenues will continue to flourish (even after the pandemic ends)”, and this is further confirmed by Wijman (2021) that the forecast in 2023 is over 200 billion dollar value and reaching 218.7 billion in 2024 and having 3.32 billion players in the same year. In addition, there is also an increase of games that support crossplay (where players that have different platforms can play the same game together), which means that more players can get together and play online (Wijman, 2021).

## 2.2. Subscription in Gaming

After seeing how the gaming industry is now and the predictions of the future, it is time to see what types of subscriptions there are in gaming and what they are worth.

First, there are five types of subscriptions in gaming, and they are:

- Subscription to a service to have access to games – An example of this is EA Play or Xbox Game Pass, where the consumers pay a fee and have access to a library of games made by the publisher.
- Subscription to play online – PlayStation Plus, for example, where consumers pay a fee to play games online.
- Subscription inside the game for access to benefits – For instance, “Fortnite Crew”, where the gamer pays a fee to grant access to unique benefits.
- Subscription boxes online – Such as Humble Bundle that last year, offered a new box of games every month (this year, they also have a subscription, but the consumer gets to pick the games they want from a list every month).
- Subscription for Cloud Gaming – Here, the consumer pays a fee to play the games they already own on different devices, for example, PlayStation Now or Google Stadia.

According to Juniper Research report, “(...) video games service platforms, such as EA Play and PlayStation Now, will grow to an \$11 billion sector by 2025, up from an estimated \$6.6

billion this year” (Juniper Research, 2020), showing how much of an impact these subscriptions services will have in the future, however, they expect that only 25% will be revenue made from cloud gaming services. Furthermore, in Nielsen (2019), we can see that millennials are the ones that spend more a month on gaming subscriptions services with an average of 20.04 dollars and Gen Z with 17.52 dollars. In addition, consumers that subscribe to these gaming services “(...) spend 4x the amount of time, 3x the amount of money, and play 2.5x the number of games compared to non-subscription-based gamers (...)” (CBINSIGHTS, 2020).

According to a graph displayed in CBINSIGHTS (2020), the five most important factors when subscribing to a gaming subscription are the price (51%), the number of games the subscription has (37%), the discounts provided to buy games (32%), having the games they want to play for free (31%) and the availability of all-new multiplayer games (27%). It is also possible to see in Kunst (2021) that in Portugal, 6% of the survey respondents had already spent money on video game subscriptions.

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**H1.1: Price** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.2: Number of games** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.3: Discounts to buy games** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.4: Having the games they want** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.5: Availability of all-new multiplayer games** is an attribute Portuguese gaming consumers value on gaming subscriptions

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Since this dissertation aims to study more about subscriptions that give consumers access to games, it is essential to know what companies provide them in Portugal. This study will consider three consoles/platforms that gamers use: PC, PlayStation, and Xbox since most of these subscriptions can be used on different platforms.

Four companies have these subscriptions, and it is important to identify the differences between them (Google Stadia Pro will not be considered even though they offer a small library of games to subscribers, their focus is cloud gaming, and the games that each platform has will not be considered since they are constantly changing with new games being added and older ones being taken off).

### 2.2.1. EA Play

EA Play is the gaming subscription provided by Electronic Arts, being first released in 2014 for Xbox, initially named EA Access. Later it was released for PC in 2016 with the name “Origin Access” and later to PlayStation in 2019. Finally, in 2020 it changed the name for the current one, “EA Play”, just before it was also launched on Steam, a gaming platform for PC.

This subscription has included most of the games published by Electronic Arts; however, depending on the platform that the consumer chooses to buy, it will have different games available to play, but the personal account is not transmittable from platform to platform.

According to CBINSIGHTS (2020), some estimates say that the total of subscribers is 5 million over the different platforms; however, this number might be even more significant with the release of the service on the Steam platform.

EA Play has two levels of subscriptions:

- The basic one costs 3.99 euros a month or 24.99 euros per year, which grants access to most of the games that they have available, a special bonus for being a user of the service, up to 10 hours of new games launched by the publisher and a 10% discount to buy the games on the Origin platform.
- The premium one is called “EA Play Pro”, which costs 14.99 euros a month or 99.99 euros a year. Besides all the bonuses of the basic plan, the user gets full access to the new games launched by the publisher or added to the service and even more exceptional rewards on games. This plan can only be acquired on PC through the Origin platform.

### 2.2.2. Xbox Game Pass

Xbox Game Pass is Xbox’s service and launched in 2017 (Humphries, 2017). It provides the users of this service with over one hundred games from different publishers for Xbox One, Xbox series X and S, and PC. Some estimates say that the number of subscribers of this service goes as high as 9.5 million users a month (CBINSIGHTS, 2020).

They have three different plans for their consumers:

- They have a plan for console users that costs 9.99 euros a month, and grants access to all the games on their list, new launches made by Xbox Game Studios and promotions and discounts.
- A different plan for PC users is available that also costs 9.99 euros a month, and besides the same benefits of the console plan, they also have access to EA Play as part of their subscription.
- Purchasing their premium subscription costs 12.99 euros a month and has the same benefits as the PC subscription, however, in this case, the user can play on their PC, Xbox or via a phone with cloud gaming, and have Xbox Live Gold which allows users to play Xbox online, gives discounts in the Microsoft store and two free games every month.

It is also important to mention that there have been some complaints about this service for computer users. For example, as seen by Corden (2021), there are usability problems with the app, and sometimes it does not let the user download games and the games themselves have problems that do not occur on other platforms.

### 2.2.3. PlayStation Now

PlayStation Now is the service provided by PlayStation, and it was launched in 2015 (PlayStation Now News, 2021). It provides the users with hundreds of games from PS2, PS3 and PS4, and it can be used on PS4, PS5 and PC (only through cloud gaming). It is also important to mention that users can change the platform they use with this service, and all progress is transmitted to all the platforms.

A consumer needs to pay 9.99 euros a month, 24.99 euros every three months, or 59.99 euros a year to get this service.

At the end of 2019, there were 1 million users of this service (CBINSIGHTS, 2020).

### 2.2.4. Ubisoft Plus

Ubisoft Plus, previously called Uplay Plus, is the subscription service created by Ubisoft in 2019 (Ammerman, 2020). This service is only available for PC or cloud gaming with Google Stadia or Luma (Amazon's cloud gaming platform).

There is only one plan of this service, and it costs 14.99 euros a month, which provides the users' access to new releases that the publisher has, in addition to over 100 games, including extras for the games.

### 3. Literature Review

#### 3.1. Subscription Model

According to Campbell (2019), a subscription business model is a way to “generate revenue by charging customers a recurring fee that is processed at regular intervals”. In other words, it is a different method that companies have to sell their product or service more consistently.

One source considers that subscriptions started to arise in the 1500s (Warrillow, 2015) with European map publishers that would sell a subscription for future map editions since they were improving a lot as time went by, which would help them get the income they needed to map the discoveries. Different companies adopted the subscription model, and different subscription models were created as time went by. As to how many types of subscription models exist, different authors present different numbers.

Campbell (2020) argues that there are four more predominant types of subscriptions which are:

- Software as a Service, where the company provides software to the market, but the client cannot buy it and use it. It needs to keep paying the company to use it (an example of this is Adobe with the different software it owns).
- Subscription boxes are a more recent type of subscription, but it is gaining popularity, where the client subscribes to a monthly box of a particular product type. Only when it arrives does the person know what they received.
- E-commerce, where the client subscribes to a service to get a constant amount of a particular product, for example, getting five shaving razors delivered to their house every month. Chen, Fenyo, Yang, & Zhang (2018) also described this type of subscription as the Replenishment subscription.
- The fourth is the Accessibility subscription, where the client pays a fee to access a specific type of content or product. An example of this can be Netflix, where the client pays a monthly subscription to view different shows and movies through the platform.

Another essential point to mention in subscription services is why clients would like to have some of these services and who they are. Starting with the why, Wang, Ye, Zhang, & Nguyen

(2005) say that six reasons can have an impact on the consumer willingness to acquire these types of services:

1. Convenience is one of the most significant benefits of these subscriptions because it saves the consumers time by delivering the products or reducing the time to search for a product. In addition, it can give access to what the consumers want to watch, read, among others.
2. Essentiality of information or product for the consumer. If a product is essential to the consumer, they will be more willing to pay for it, which can be translated into subscriptions.
3. The added value that the subscription brings. If the service is not considered better or differentiated, the consumer might not adopt the service.
4. They also mentioned the importance of the perceived service quality since the consumer also expects to pay more for it if it is high.
5. Another critical point is the usage frequency. Wang, Ye, Zhang, & Nguyen mention a study that suggests that the experience the consumers have had in the past can influence their e-commerce activities significantly. In terms of subscriptions, the consumer would be willing to keep paying if they use the service.
6. The final factor is perceived fairness. It is suggested that if the consumer used to have the service for free, they could feel unjust now if a subscription to the service becomes paid. It is also mentioned that consumers believe that advertisers also finance businesses, and if companies charge them for the service, they can feel unfair.

The effect of security, age and gender was also studied, but these factors were insignificant between the consumers willing or not willing to acquire these services.

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**H1.6: Convenience** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.7: Essentiality of product** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.8: Added Value** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.9: Service quality** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.10: Usage frequency** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.11: Fairness** is an attribute Portuguese gaming consumers value on gaming subscriptions

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On the other hand, Hansen (2018) discusses different factors why consumers love subscriptions. First, Hansen says that the reduced complexity is also a reason why they adore subscriptions because this way, they do not have to choose since the consumer can get what they need to be shipped to their house regularly, for example. Second, it is also mentioned that these services can inspire their customer, such as subscription boxes. In these boxes, the customer can receive products that they have never used before or something new to try. The third factor is the possible introduction of the consumer to a community that acquires the same service or product. Finally, the last factor according to Hansen is saving money, which people appreciate, as companies can reduce costs, which leads to a lower price.

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**H1.12: Reduced Complexity** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.13: Inspiration** is an attribute Portuguese gaming consumers value on gaming subscriptions

**H1.14: Community** is an attribute Portuguese gaming consumers value on gaming subscriptions

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Hansen also refers to convenience as something consumers appreciate, reinforcing more what Wang, Ye, Zhang, & Nguyen declared.

Even though Wang, Ye, Zhang, & Nguyen suggested no difference in willingness to pay by gender, Chen, Fenyo, Yang, & Zhang (2018) indicates a difference in male and female subscriptions. The survey shows that 42% of men have three or more subscriptions while women only have 28%. However, women account for the majority of subscriptions. In other words, when men subscribe to subscription services, they tend to do it in different ones simultaneously, but women are the ones that more easily start subscribing to services.

### 3.2. Access-Based Services and Accessibility Subscription

Access-Based services can be defined as “transactions that may be market mediated in which no transfer of ownership takes place” (Bardhi & Eckhardt, 2012). Essentially, the consumers acquire time to use the product or service instead of buying or owning it. (Bardhi & Eckhardt, 2012).

Lovelock & Gummesson (2004) state that one of the categories of nonownership are rented goods services where “customers obtain the temporary right to exclusive use a physical good that they do not wish to own or cannot afford to purchase outright” (Lovelock & Gummesson, 2004). However, nowadays, this definition can be extended to the non-physical since some products do not have a physical presence. If rented goods services become consistent and long-term, it can also be considered a subscription service. Because of this, it is possible to conclude that even though not all access-based services can be accessibility subscriptions, all accessibility subscriptions can be considered access-based services.

Bardhi & Eckhardt (2012) identified six dimensions to which different types of access consumption differ from each other:

1. Temporality – which can be divided into the duration of access and usage. In terms of access, some services can have a one-time transaction while others can be long term. Regarding usage, it can also be long term or short term, for example, leasing a car for two years instead of car sharing for one hour.
2. Anonymity – It can be private or public access to the service. In the case of a car share, the user does not have contact with previous service users, while at a gym, they can access the service simultaneously as other users. They also mention spacial anonymity, which refers to the distance of the product and the consumer.
3. Market Mediation – In this dimension, the authors differentiate between profit and non-profit. For example, a library can give non-profit access to consumers while companies like Netflix are looking for profit.
4. Consumer Involvement – The consumer can have low involvement with the service, for example, car-sharing where it only uses the product for a limited time, or high involvement, for example, with car rentals where the customers use the car as their own.
5. Type of Accessed Object – This dimension can be divided into two; the nature of the access that can be experiential or functional, and if the access is material or digital.

6. Political Consumerism – This is the last dimension and represents the possibility of consumers using their choice of consumption of access as an ideological move.

On the other hand, Hazée, Delcourt, & Vaerenbergh (2017) identify three characteristics of access-based services. First, they say it requires high involvement and minimal supervision by the company. Secondly, interpersonal anonymity is mentioned where the consumer does not have contact with other consumers. Thirdly, it is the substitute for ownership which was also seen in the definition of these access services. However, the first and second characteristics do not agree with Bardhi & Eckhardt (2012) since the service can be of low involvement and public in their dimensions.

Hazée, Delcourt, & Vaerenbergh (2017) also found four main barriers that consumers can have regarding access-based service innovation:

1. Complexity – In here, the author separates this barrier into four difficulties for the consumers, and they are: difficulty in understanding the service, in accessing it, the transaction with it and using it.
2. Reliability – Here, the author mentions five uncertainties that customers can feel in access-based services: the consistency of the service, accurate performance of the product, self-service technology (“(...) technological interfaces that enable customers to produce a service independent of direct service employee involvement” (Meuter, Ostrom, Roundtree, & Bitner, 2000)), other consumers use of the service and the use of the service by the customer itself.
3. Contamination – In the case of tangible products, since it has contact with other consumers, there can be a perception of contamination from users, creating a sense of aversion.
4. Responsibility – Here, the customer can be reluctant to be held responsible for a product they do not own or for damages that other consumers might have done to the products.

Since contamination needs a physical product, it will not be considered in the study, given that gaming subscriptions are only digital. Additionally, since it is an individual product where other consumers do not have contact with it, responsibility also does not have a purpose on these types of subscription services. Finally, in terms of reliability, other consumers’ use of the service does not affect it since it is individual and exclusive to each consumer.

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**H2.1:** Gaming subscriptions are **difficult to understand** by the Portuguese gaming consumer

**H2.2:** Gaming subscriptions are **difficult to access** by the Portuguese gaming consumer

**H2.3:** Gaming Subscriptions are **difficult to transaction** with by the Portuguese gaming consumer

**H2.4:** Gaming subscriptions are **difficult to use** by the Portuguese gaming consumer

**H2.5:** Gaming subscriptions are **not consistent** for the Portuguese gaming consumer

**H2.6:** Gaming subscriptions **do not have an accurate performance** to the Portuguese gaming consumer

**H2.7:** Gaming subscriptions **have self-serving technology that is difficult to use** by the Portuguese gaming consumer

**H2.8:** Gaming subscriptions **need technical skills to be used** by the Portuguese gaming consumer

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## 4. Methodology

### 4.1. Qualitative Study

To assess the previously formulated hypothesis during the literature review and to see if any different ones were not found but could exist, it is essential to do a qualitative study since this will allow speaking with the consumers directly.

For this, interviews were held based on a set of structured questions to understand different thoughts and feelings that the interviewees could have; however, they were always encouraged to give additional feedback for each question that was asked to discover more ideas and not only the first thought they might have had.

The first section of the interview was composed of general questions regarding demographics, some gaming habits and knowledge of the concept. Then, depending on whether the interviewee ever had an access-based gaming subscription, they would answer a different set of questions. In the first case, questions regarding the before, during and after purchase were made to find out why they bought the subscription, problems they might have had and what they thought about the product. If they never had the service, questions around what could make them buy it and how much they would be willing to spend for it.

After the interviews, it was now essential to validate all hypotheses created and, for this, a quantitative study was required.

### 4.2. Quantitative Study

In order to collect the ideas and thoughts of Portuguese gamers regarding access-based gaming subscriptions, it was essential to reach a large audience. For this, an online survey was created to allow sharing the questionnaire at no expense. To create the survey, an online software was used called Qualtrics since it lets the user download all the data directly to SPSS software (Statistical Package for the Social Sciences), which would be used to analyze the data.

To distribute the survey, different platforms were used. The most important one was Facebook, where the questionnaire was shared on different Portuguese gaming groups to reach the dissertation's pretended target. It was also shared on Instagram and sent directly to friends and family. To acquire answers faster, a giveaway was created, where a random person would be selected to receive a 20 euro gift card from the gaming platform of their preference.

The questionnaire was composed of 12 questions and was divided into six sections: Filter questions, knowledge and ownership of the product, drivers, barriers, willingness to pay and demographics. The drivers and barriers sections were composed of the hypothesis created with the literature review and the qualitative study.

The first one was composed of two questions regarding whether they consider themselves gamers and how much time they spent gaming a week. Respondents who did not consider themselves gamers or did not spend at least 5 hours gaming per week did not get to answer the rest of the questionnaire, since the dissertation is focused on gamers and their thought on access-based gaming subscriptions.

The second section was created to see if they knew what these services were, and if not, a brief explanation was made for them. After, they had to answer if they ever had, or currently have, one of the available services. This section was created to discover any differences between the respondents during the analysis.

The third and fourth sections were composed of a matrix with the different hypotheses that were established before. Here, they had to say how much they agree with each variable on a Likert scale of 1 to 5 (1 being Completely disagree and 5 being Completely agree).

The fifth section was composed of one question, and here the respondent had a slider where they could say how much they would be willing to pay for an access-based gaming subscription.

The last section was demographics, where the respondents answered questions regarding age, gender, nationality, the country they live in and their current occupation.

After the collection of data, different tests and statistics were made, more specifically: Frequency and Descriptive statistics for a more general view of the data; ANOVA tests to compare how the different groups thought about the different variables (with Levene's and Welch and Brown-Forsythe to validate the data); One-Sample T-Test to discover what was statistically significant to what the respondents thought was more important in the different variables; Correlation test to see any correlations in the data; Factor analysis to group the different variables (with KMO and Bartlett test to validate the choice of making the factor analysis); Cluster analysis with the factor previously made to group the different respondents in terms of their answers and, to finish, Crosstabs and Chi-Square to see if the clusters were independent of having the subscription or not. All analysis were performed at the 5% level of

significance; however, some tests were also accepted at the 10% level, and each case it happened is mentioned. For the Anova and T-Test analysis, the assumption of normality of the variables was considered since the sample size is reasonable and, therefore, not needed (Berg, s.d.).

## 5. Qualitative and Quantitative Results

### 5.1 Qualitative Study

In order to get a first view of how Portuguese consumers view access-based gaming subscription services, interviews were conducted. This method was chosen to allow the participants to speak about what they thought and experienced about these new subscription services. Because of this, ten interviews were done with subscribers and non-subscribers of these services (five participants of each) since this would allow collecting some insights about the reasons they subscribed or did not subscribe. Thus, there were two groups of questions, one for subscribers and another for non-subscribers. The majority of participants were male (90%) and predominantly aged 20 to 23 (90%).

Regarding the first research question about the drivers for access-based gaming subscriptions, some of the previously thought hypotheses were mentioned as reasons they had subscribed and valued the service. The most mentioned drivers that the participants valued were price (**H1.1**), the number of games (**H1.2**) and having the games they want (**H1.4**). There was one participant that also mentioned that they bought the service for the discount in games (**H1.3**) and another participant that said she did not have enough time in order to play, and, if she had, she would validate the value of usage frequency on gaming subscriptions (**H1.10**).

The added value of the service (**H1.8**) was indirectly mentioned when one consumer said that they bought the service because of the number of games available at a small price.

The other hypotheses were not mentioned and are not validated in the qualitative study (**H1.5; H1.6; H1.7; H1.9; H1.11; H1.12; H1.13; H1.14**).

Some hypotheses are also validated regarding the second research question concerning the service's main barriers. One of the participants mentioned that these services could be hard to understand (**H2.1**), especially in knowing which games it has available. Another participant mentioned that the service was hard to use, and the app also gave him problems (**H2.4** and **H2.7**). There were also complaints about the consistency and accurate performance of the service made by another participant (**H2.5** and **H2.6**).

The participants also mentioned that there was no difficulty to access (**H2.2**) or to transaction with (**H2.3**) the service, and there was no mention of the need for technical skills to use the service (**H2.8**) by the subscribers.

One of the participants mentioned a different barrier: the different games he liked were from different companies, which means he would have to buy more than one service to enjoy them. This creates a new hypothesis which is:

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**H2.9: Games that the Portuguese gaming consumer wants to play are **divided into different Gaming subscriptions****

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Regarding the last research question regarding the willingness to pay, it is possible to see that 50% of the consumers are willing to pay more than 5.52 euros, 30% are willing to pay between 3.39 euros and 5.52 euros, and only 20% are willing to pay less than 3.39 euros a month. Therefore, the average willingness to pay is 7.46 euros a month for the gaming subscription services, which is consistent with the H3.3 hypothesis.

As seen, some hypotheses were not validated; however, it does not mean they are rejected since this sample is low and is not representative of reality. With the following quantitative analysis, it will be possible to see if all the hypotheses previously seen are indeed rejected or not rejected.

## 5.2. Quantitative Analysis

The survey was active between the 28<sup>th</sup> of November and the 4<sup>th</sup> of December, 2021. A total of 373 surveys were started, and 317 were fully completed, resulting in an 85% completion rate. However, when participants answered the first question with “Strongly disagree” or “Somewhat disagree” or that answered “Less than 5 hours” in the second question, did not get to complete the rest of the survey. This service is directed at gamers, and a minimum level of activity in video games was requested to understand how gamers thought about access-based gaming subscriptions, which represented 225 answers to analyze (71% of the total completed surveys).

To collect the data, the survey was shared on different Facebook pages related to gaming and video games to increase the chances of getting more accurate answers. It is also relevant to mention that a giveaway was created to attract more answers, and one random respondent received a 20 euro gift card of their choosing.

The survey was shared in Portuguese and English. However, only the respondents with Portuguese nationality were considered since this thesis focuses on Portuguese consumers.

### 5.2.1. Sample Characterization

Regarding the sample, it is possible to see, from Table 1, that 56.1% of the respondents strongly agree that they are gamers, and, from Table 2, it is possible to tell that 41.4% of the respondents play more than 10 hours.

As regards to the choice of the respondents having already bought an access-based gaming subscription, 57.8% say they have one now, and 28% had one but not anymore (Table 3). Still, 90% of the respondents said they knew what access-based gaming subscriptions were, and 9,3% knew more or less what it was (Table 4). There was just one person that did not know what these subscriptions were.

Regarding age, 52.9% of the respondents are between 25 and 34, and 22.7% are between 35 and 44 (Table 5), with 86,1% being males (Table 6). In terms of their occupation, 64% are employed full time, and 19.1% are students (Table 7).

### 5.2.2. Research Question Analysis

Before looking at each research question, a method was used to see if the scales were considered reliable in terms of their internal consistency, and for this, Cronbach’s Alpha was used. Considering the driver’s scales, it obtained a value of 0,833 (Table 8), and the barriers scale a

value of 0,903 (Table 9). Both should be higher than 0,6 to be considered acceptable (Malhotra, Nunan, & Birks, 2017), and, since they are, these scales can be replicated in the future for more studies on access-based gaming subscriptions.

**Q1: What are the main drivers in gaming subscription services?**

In terms of drivers to acquire an access-based gaming subscription, the most relevant is the “Number of Games” that the service has with a mean of 4,25 out of 5 and followed closely with the “Service Quality” with 4,15 out of 5. On the other hand, the variables that have the lowest mean is “Community” with 3,16 and “Inspiration” with 3,18, meaning that all variables are over the scales middle point of 3 (Table 10).

Using the number 3 as a reference in the One-Sample T-test, almost all variables are statistically significant at the 5% level except “Community”, which is significant at the 10% level (Table 11).

To access the most essential and valued attributes, the same test can be made with a higher scale of 4. In this case, there are only two attributes that are statistically significant and higher than 4, and they are “Number of Games” (p = 0,000) and “Service Quality” (p = 0,029) (Table 12).

Table 12 - One-Sample Test Drivers – Teste Value = 4

	t	df	Test Value = 4		95% Confidence Interval of the Difference	
			Sig. (2-tailed)	Mean Difference	Lower	Upper
Price	-,727	224	,468	-,053	-,20	,09
Number of games	4,209	224	<b>,000</b>	,253	,13	,37
Discount to buy games	-1,834	224	,068	-,147	-,30	,01
Having the games you want	,823	224	,411	,058	-,08	,20
Availability of all-new multiplayer games	-3,660	224	,000	-,311	-,48	-,14
Convenience	,983	224	,327	,067	-,07	,20
Essentiality of product	-9,226	224	,000	-,782	-,95	-,62
Added Value	-2,074	224	,039	-,156	-,30	-,01
Service quality	2,204	224	<b>,029</b>	,151	,02	,29
Usage frequency	1,508	224	,133	,098	-,03	,23
Fairness	-7,603	224	,000	-,560	-,71	-,41
Reduced Complexity	-6,912	224	,000	-,556	-,71	-,40
Inspiration	-10,241	224	,000	-,822	-,98	-,66
Community	-9,847	224	,000	-,836	-1,00	-,67

Before looking at differences between the respondents in terms of whether they have an access-based subscription service, now, before, or never it is important to see if the homogeneity of variances is not rejected in Levene's Test (Table 13). Two variables have a p-value of less than 0,050, which means they reject the hypothesis of equal variances and do not pass the test: "Convenience" (p = 0,045) and "Usage Frequency" (p = 0,007). Furthermore, it is possible to use the Welch and Brown-Forsythe Test (Table 14) in these two variables as an alternative to ANOVA to test the equality of means. In this case, "Convenience" is statistically not significant (Welch - p = 0,105 and Brown-Forsythe - p = 0,104) while "Usage Frequency" is statistically significant at the 10% level (Welch - p = 0,072 and Brown-Forsythe - p = 0,086).

In Table 15, it is possible to view some significant differences between the respondents regarding whether they have an access-based subscription service, now, before, or never. There are six variables where the mean is different and significant at the 5% level in some cases and at the 10% level in others and they are "Number of games" (p = 0,052), "Essentiality of product" (p = 0,052), "Reduced Complexity" (p = 0,070), "Inspiration" (p = 0,066), "Community" (p = 0,006).

Table 16 – Significant Driver Descriptives on each group

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
Number of games	Yes, I have one now	130	<b>4,38</b>	,800	,070	4,24	4,52
	Yes, but not anymore	63	<b>4,06</b>	1,014	,128	3,81	4,32
	No	32	<b>4,13</b>	1,008	,178	3,76	4,49
Essentiality of product	Yes, I have one now	130	3,39	1,138	,100	3,19	3,59
	Yes, but not anymore	63	2,95	1,385	,174	2,60	3,30
	No	32	3,03	1,470	,260	2,50	3,56
Usage frequency	Yes, I have one now	130	<b>4,23</b>	,831	,073	4,09	4,37
	Yes, but not anymore	63	3,97	1,077	,136	3,70	4,24
	No	32	3,81	1,203	,213	3,38	4,25
Reduced Complexity	Yes, I have one now	130	3,60	1,152	,101	3,40	3,80
	Yes, but not anymore	63	3,27	1,208	,152	2,97	3,57
	No	32	3,16	1,347	,238	2,67	3,64
Inspiration	Yes, I have one now	130	3,25	1,222	,107	3,04	3,47
	Yes, but not anymore	63	3,25	1,121	,141	2,97	3,54
	No	32	2,72	1,224	,216	2,28	3,16
Community	Yes, I have one now	130	3,35	1,243	,109	3,13	3,56
	Yes, but not anymore	63	3,10	1,214	,153	2,79	3,40
	No	32	2,56	1,343	,237	2,08	3,05

Only “Usage Frequency” is above 4 for the respondents that have a subscription (Table 16), the significance level can be tested with a One-Sample T-Test, and this variable is significant ( $p = 0,002$ ) (Table 17).

With this analysis, it is not possible to not reject the variables “Number of Games” (H1.2) and “Service Quality” (H1.9) as important attributes and statistically significant. “Usage frequency” (H1.10) is also important and statistically significant to the respondents that already have an access-based gaming subscription, and, therefore, it is not rejected. The other Hypothesis (H1.1; H1.3; H1.4; H1.5; H1.7; H1.8; H1.11; H1.12; H1.13; H1.14) are then rejected. Hypothesis H1.6 is neither rejected nor not rejected since it did not pass Levene’s test and Welch and Brown-Forsythe test, and therefore, no conclusions can be made of it.

#### Q2: What are the main barriers to the consumers acquiring these services?

The main barriers to access-based gaming subscriptions are the dimensions with the value superior to the scale’s midpoint, which is three. The only variable above this value is the “The games are divided in different subscriptions”, with a value of 3,24. It is also possible to see that the “Technical skills” is the variable that is least seen as a barrier by the Portuguese consumers (Table 18).

Using this point and the One-sample T-Test, this variable is statistically significant ( $p = 0,010$ ) and the only one over the middle point (Table 19). Because of this, we can say that this is the main barrier to Portuguese consumers.

Table 19 - One-Sample Test Barriers – Teste Value = 3

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
They are difficult to understand	-10,809	224	,000	-,862	-1,02	-,71
They are difficult to access	-10,151	224	,000	-,853	-1,02	-,69
They are difficult to transaction with	-6,925	224	,000	-,622	-,80	-,45
They are difficult to use	-11,760	224	,000	-,991	-1,16	-,83
They are not consistent	-2,900	224	,004	-,253	-,43	-,08
They do not have an accurate performance	-4,382	224	,000	-,391	-,57	-,22
The app is difficult to use	-9,433	224	,000	-,822	-,99	-,65
They need technical skills to be used	-14,290	224	,000	-1,093	-1,24	-,94
The games are divided in different subscriptions	<b>2,588</b>	224	<b>,010</b>	,244	,06	,43

Before looking at the differences between the respondents that have an access-based gaming subscription, the ones that had one before but not anymore, and the ones that have not had one, it is important to see if they pass Levene's and, in this case, in all of the questions the homogeneity of variances is not rejected, and it passes the test (See Table 20). Now it is possible to look at the Anova table, where the means are different and statistically significant (See Table 21 on five occasions, and they are: "They are difficult to use" ( $p = 0,047$ ); "They are not consistent" ( $p = 0,019$ ); "They do not have an accurate performance" ( $p = 0,013$ ); "The app is difficult to use" ( $p = 0,026$ ) and "The games are divided in different subscriptions" ( $p = 0,038$ ).

On these five occasions, there are four where the respondents that have never had an access-based gaming subscription agree more to the barriers than the others. However, in one of them, there is only a difference of 0,04, and the one that is not higher is also only by 0,04 (Table 22).

Table 22 – Significant Barriers Descriptives on each group

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
						Lower Bound	Upper Bound
They are difficult to use	Yes, I have one now	130	1,88	1,218	,107	1,67	2,10
	Yes, but not anymore	63	2,02	1,251	,158	1,70	2,33
	No	32	2,50	1,391	,246	2,00	3,00
They are not consistent	Yes, I have one now	130	2,56	1,282	,112	2,34	2,78
	Yes, but not anymore	63	2,87	1,326	,167	2,54	3,21
	No	32	<b>3,25</b>	1,270	,225	2,79	3,71
They do not have an accurate performance	Yes, I have one now	130	2,38	1,326	,116	2,15	2,61
	Yes, but not anymore	63	2,90	1,266	,160	2,59	3,22
	No	32	2,94	1,390	,246	2,44	3,44
The app is difficult to use	Yes, I have one now	130	2,00	1,239	,109	1,79	2,21
	Yes, but not anymore	63	2,30	1,328	,167	1,97	2,64
	No	32	2,66	1,428	,252	2,14	3,17
The games are divided in different subscriptions	Yes, I have one now	130	<b>3,04</b>	1,411	,124	2,79	3,28
	Yes, but not anymore	63	<b>3,54</b>	1,412	,178	3,18	3,90
	No	32	<b>3,50</b>	1,344	,238	3,02	3,98

Since the variable "They are not consistent" is over the middle point of 3 for the respondents that do not have a subscription, the One-Sample T-Test can be made; however, this difference is not statistically significant ( $p = 0,274$ ) (Table 23).

After this analysis, it is possible to conclude that only Hypothesis 2.9 is not rejected since it is statistically significant and higher than 3. All other Hypothesis (2.1; 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8) are therefore rejected.

### Q3: How much are consumers willing to pay for gaming subscription services?

The last research question is about how much Portuguese consumers are willing to pay for these services.

It is possible to see in Table 24 that the average willingness to pay is 7,80 euros. This value is statistically significant ( $p = 0,000$ ) and higher when compared to the third hypothesis, which said that they would be willing to pay more than 5,52 euros (Table 25).

Furthermore, it is possible to compare how much the respondents are willing to pay depending on if they have the product, have already had the product but not any more, or never had the product. Before looking at each mean, they must pass Levene's test (Table 26), and, in this case, the homogeneity of variances is not rejected, and it passes the test ( $p = 0,516$ ). The average does change between them, and the respondents who have the product are willing to pay more with an average willingness to pay 8,36 euros. The ones who have already had the product are willing to pay 7,48 euros, and those who have not had the product are willing to pay 6,14 euros (Table 27). This difference is statistically significant at the 10% level ( $p = 0,083$ ) (Table 28).

Table 27 – Willingness to Pay Descriptives on each group

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Yes, I have one now	130	<b>8,3623</b>	4,91279	,43088	7,5098	9,2148
Yes, but not anymore	63	<b>7,4778</b>	5,08827	,64106	6,1963	8,7592
No	32	<b>6,1406</b>	6,42690	1,13613	3,8235	8,4578
Total	225	7,7987	5,23335	,34889	7,1111	8,4862

Since they are statistically different, it is essential to compare each result with the hypothesis that was created before. In Table 29 and 30, it is possible to see that the willingness to pay from respondents that have access-based gaming subscriptions or that have already had one, but not anymore, are statistically different ( $p = 0,000$  and  $p = 0,003$ , respectively) and higher than the third hypothesis of 5,52 euros. However, for respondents that have never had one of these subscriptions, it is not statistically significant ( $p = 0,589$ ) from 5,52 euros even though it is higher with an average of 6,14 euros (Table 31). On the other hand, compared with the second

hypothesis, which says that the Portuguese consumer is willing to pay between 3,39 euros and 5,52 euros, we can see that it is statistically significant ( $p = 0,022$ ) when compared to a value of 3,39 euros (Table 32).

This information makes it possible to reject Hypothesis 3.1 since the average willingness to pay is always higher and statistically significant than 3,39 euros. On the other hand, hypothesis 3.2 is not rejected since the consumers that have not yet purchased an access-based gaming subscription are statistically willing to pay more than 3.39 euros but not statistically significant in terms of paying more than 5,52 euros. Hypothesis 3.3 is also not rejected since there are two groups of respondents willing to pay more than 5,52 euros and since the global average is statistically significant and higher than 5,52 euros.

### 5.2.3 Cluster analysis

Another analysis was made to check for correlations in the different variables of drivers and barriers to see if they are associated with each other. It is possible to see in Table 33 that in the case of the drivers, most of the variables are correlated with some exceptions, for example, “Discount to buy games” and “Price” that has a p-value of 0,910. In the case of barriers, all the variables are closely correlated, as can be viewed in Table 34. Because of all these correlations, and since this study wants to perform a cluster analysis to see if there are any groups of respondents that value different variables, a factor analysis will be done to shorten these variables. This is confirmed with the KMO and Bartlett's test with a value of 0,854 and a p-value of 0,000 (Table 35), which indicates that factor analysis could be useful for the data.

The Scree Plot criteria (Graph 1) was used, and a 3-factor model was chosen. The reason for this is that even though the fourth factor had an eigenvalue of over 1, this only explained an extra 4,5% of the variance (Table 36). The fourth factor only had one variable with a higher value than the other factors when tested. The three factors were named based on their Rotated Component Matrix (Table 37) depending on what each factor has as relevant variables as “Factor\_Barriers”, “Factor\_Other\_Specific\_Drivers” and “Factor\_Value\_For\_The\_Money”, respectively.

With these factors, 4 clusters were made using the K-Means method (Table 38): It is possible to see from the final cluster centres that: the first one are gamers that agree that the service brings value for the money; however, they do not agree with the barriers and the other drivers; the second one strongly does not agree that it has value for the money, but they also do not

agree with the other factors; the third one also does not agree with the barriers; however, they see drivers in terms of value for the money and other specific drivers, and the fourth cluster strongly agrees with the barriers, however, they also agree with the other two factors.

To see if these clusters are statistically independent against if they have a subscription now, before, or ever, and to see if more analysis should be made to these clusters, it is possible to use Crosstabs and, it is possible to see in Table 39 they are not statistically independent since its p-value = 0,106.

## 6. Conclusion

### 6.1. Managerial Conclusions

After all the analysis made with the qualitative and quantitative study, it is relevant to reflect on how these results can be improved or mitigated to improve the adoption of the service by the Portuguese consumer.

As was seen, the most important drivers to these consumers are the “Number of Games”, “Service Quality”, and “Usage frequency”.

Concerning the number of games, it has already been seen that the companies are already trying to improve the number of games they have and even communicating this by saying that they have more than 100 games available to the consumer. The usage frequency is also more important for the consumers that already have the service; however, in this variable, there is not much the companies can assist since this depends if each consumer has the time to use the service frequently. What they can do is create notifications to let the current users know about new games released and older ones that might leave the service in order to increase use by the consumer.

In terms of service quality, as was seen in the beginning, there have been some reports of issues with using one of the services (Corden, 2021). Since this is relevant to the consumer, it would benefit these companies to make some developments to the subscription. Even though it was seen that this was not a barrier for the consumers, if some companies provide a better service quality than the others, they will likely choose one over the other.

Looking further into the barriers, the most relevant one is that the games are divided into different subscriptions. In order to reduce this, there are two possibilities: either these subscriptions come together, and an example of this is Xbox Game Pass that already has EA Play inside some of the plans they offer, or the companies that have these subscriptions share the games they have inside the subscriptions between them. However, with the second possibility, the companies also lose some of the exclusivity that their subscription might have, and they would need to stand out from the competition with other variables that were already seen.

In terms of the willingness to pay, it was seen that they are willing to pay on average 7,80 euros which is more than the average spent in Portugal and Europe on video games and is more than

the cost of some subscriptions like EA Play (the base version) and also PlayStation Now (when purchased annually), yet, in the other two subscriptions there is not a plan that costs less than 7,80 euros or 8,34 euros (for the consumers that might already have one subscription) which can cause consumers not to adopt these two services in particular. Therefore, even though the price was not the most relevant attribute, if the services cost more than what the consumers are willing to pay, it can reduce the adoption level.

It was also perceived that the people that have the service or had the service before are willing to pay more than the respondents that never had the service. Because of this, these companies should focus more on having inexpensive ways to let the consumers try the service first. Some of these services have a trial period or inexpensive first months (For example, Xbox Game Pass with 1 euro for three months), which can help convince the consumers to keep the service as a paid subscriber.

With the clusters, it is possible to see that the respondents value different variables regarding access-based gaming subscriptions. A group of gamers see a lot of barriers, but also see some advantages, and for them, it is essential to mitigate this since otherwise, they might not want to acquire the service. All the other groups do not see these barriers as much, and so, for them, it is important to show the advantages depending on what they value the most; some want value for their money, while others are more focused on a more online and interaction aspect of the service.

To sum all the main take away:

- Companies should invest more in providing more games and improving the service quality since these are the general drivers of the service.
- For the gamers that already have the subscription, receiving notifications of new games released in the service and older ones that are leaving to improve the usage.
- Collaboration between companies, and their subscription services, so that the consumer does not have to choose just one of them, or they can share the games each company has with each other and differentiate with service quality.
- Provide trial periods to increase adoption of the subscriptions and create cheaper plans that cost less than 7,80 euros or 8,34 euros for the people who have already tried the service either by acquiring one or using a trial period.

- Adjust the different strategies depending on the type of customer they might have to improve the chances of adoption to the service.

## 6.2. Limitations and Future Research

Regarding limitations in this study and the dissertation, the main one is related to the biased sample of male gamers. According to Entertainment Software Association (2021), 45% of US Gamers identify themselves as females, and in this study, there was only 13.5%. This means that potentially important findings and differences might have been covered with the answers of male respondents. Therefore, for the future, it would be essential to see if there are different variables that the female gamer values more or less, and if so, which ones they are since this can impact the strategies that the companies can make.

There was also a limitation given the number of respondents that have never tried an access-based gaming subscription. While sharing the survey, it was mentioned that the study was about these types of services, and it is possible that people that have never tried it did not answer because they thought it was not for them or because they did not know enough to answer. For future research, it would be important to see the gamers who have not yet tried the service and discover why they have not and see if their answers differ significantly from the ones discovered in this thesis.

Additionally, some platforms were not considered for this study to create a more levelled plain field. For example, different services have included a library of games, but they were not considered in the first analysis since it is not their focus. Because of this, additional studies on other platforms like Nintendo (with Nintendo Switch Online) or online platforms like Google Stadia could be made to see if the consumers value the same variables regarding the access-based aspect of those services.

Another limitation can be regarding the filter that was applied in the survey. It was pointed out that people who do not have time to play games and do not consider themselves gamers, might also be potential users of these services, so further research on these different types of consumers could be made.

This research focused more on the concept of access-based gaming subscriptions and not on the different brands that already have these services. Because of this, for future research, it would be interesting to see how consumers see the different brands and products and what they think of each one.

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## 8. Appendix

### 8.1. General Appendixes

#### Online Interview

#### **General Information**

- Qual é a sua idade?
- Qual é o seu género?
- Que plataformas usa para jogar?
- Quanto tempo despende por semana a jogar?
- Quanto gasta por ano em jogos?
- Sabe o que são subscrições de jogo de acesso?
  - (Se não explicar o conceito).
- Quais são as marcas de subscrição de jogos que conhece? (Caso não mencione todas perguntar se conhece uma a uma)
- Já alguma vez aderiu a uma subscrição de jogos?

#### **For those that have acquired the service:**

##### Antes da Compra:

- O que o/a levou a querer comprar um serviço de subscrição de jogos?
- Pesquisou alguma informação sobre os serviços antes da compra?
- Como é que decidiu qual serviço de subscrição comprar?
- Qual foi a razão que o fez comprar este serviço e não outro?

##### Durante a compra:

- Qual é o serviço que adquiriu?
- Como é que se sentiu quando comprou o serviço?
- Teve alguma dificuldade no processo da compra?
- Teve alguma dificuldade a instalar alguma das aplicações necessárias para o serviço?

##### Depois da compra:

- Ainda tem o serviço que adquiriu?
- Já teve algum problema com o serviço ou a plataforma que usa com o serviço?

- Utilizou muito o serviço?
- Deixou de comprar jogos quando comprou o serviço?
- Se pudesse melhorar o serviço num aspeto qual seria e porquê?
- Há alguma coisa que não é o que esperava em relação ao produto?
- Como se sente agora com a compra que fez?
- Quanto é que estaria disposto a pagar anualmente por um serviço destes?

**For those that have not acquired the service:**

- Já alguma vez pensou em comprar um destes serviços?
- Se não, porque (ver se foi falta de conhecimento ou porquê de não ter adquirido)
- Pensa no futuro em adquirir algum destes serviços?
- O que o faria comprar um destes serviços neste momento?
- O que o faria não comprar um destes serviços?
- Quanto é que estaria disposto a pagar anualmente por um serviço destes?

Online Survey

**Q1. Introduction:**

Caro entrevistando,

Desde mais obrigado pela tua participação neste questionário. Este está a ser realizado no âmbito da minha tese de mestrado em Gestão com Especialização em Marketing Estratégico na Católica-Lisbon School of Business and Economics.

O questionário terá a duração de 3 a 5 minutos. Peço que respondas honestamente a todas as questões visto ser importante perceber as tuas perceções e pensamentos. Não existem respostas corretas ou erradas.

Toda a informação é confidencial e anónima. Todos os dados recolhidos vão ser exclusivamente utilizados para este estudo no âmbito da tese. Qualquer dúvida não hesite em contactar-me pelo e-mail: s-amrafael@ucp.pt

Muito Obrigado em ajudares-me a concluir o mestrado!

## **Q2. Filter Questions:**

Q2.1 Consideras-te um *gamer*?

- Discordo plenamente
- Discordo parcialmente
- Não concordo nem discordo
- Concordo parcialmente
- Concordo plenamente

Q2.2 Quantas horas por semana gastas a jogar jogos digitais?

- Menos do que 5 horas
- Entre 5 e 10 horas
- Mais do que 10 horas

(The participants that answered “Discordo Plenamente”, “Discordo Parcialmente” or “Menos do que 5 horas” did not complete the rest of the survey).

## **Q3. Knowledge of the Concept:**

Q3.1 Sabes o que é uma subscrição de acesso de jogos?

- Sim
- Mais ao menos
- Não

(If they answered “Não” or “More or less” the text on Q4. would appear).

## **Q4. Explaining the concept**

“Subscrições de acesso de jogos são um serviço onde consegues comprar o acesso a uma biblioteca de jogos. Imagina-o como uma Netflix para jogos onde podes pagar uma mensalidade e jogar todos os jogos disponíveis no serviço na altura.

Alguns exemplos destes serviços são: Xbox Game Pass, PlayStation Now, EA Play and Ubisoft+.”

## **Q5. Does the respondent have the service?**

Q5.1. Tens, ou alguma vez adquiriste, uma subscrição de jogos de acesso?

- Sim, e ainda tenho
- Sim, mas já não tenho
- Não

## **Q6. Drivers**

Q6.1. Nos seguintes pontos escolhe quanto concordas em cada fator nas razões para comprar uma subscrição de jogos de acesso. (Range goes from “Completely disagree” to “Completely agree”).

- Preço
- Número de jogos
- Descontos na compra de jogos
- Ter os jogos que queres
- Disponibilidade de todos os novos jogos multiplayer
- Conveniência
- Produto ser essencial
- Valor adicional que traz
- Qualidade do serviço
- Frequência de uso
- Equidade
- Complexidade reduzida
- Inspiração
- Comunidade

## **Q7: Barriers**

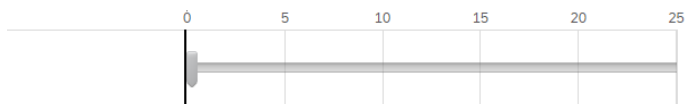
Q7.1. Nos seguintes pontos escolhe quanto concordas em cada fator nas razões para NÃO comprar uma subscrição de jogos de acesso. (Range goes from “Completely disagree” to “Completely agree”)

- São difíceis de perceber

- São difíceis de aceder
- São difíceis de transacionar
- São difíceis de utilizar
- Não são consistentes
- Não têm uma performance precisa
- A aplicação é difícil de utilizar
- É preciso conhecimentos técnicos para utilizar
- Os jogos estão divididos em diferentes subscrições

### **Q8. Willingness to pay**

Q8.1. Quanto estarias disposto/a a pagar por uma subscrição de acesso de jogos, por mês, em Euros?



### **Q9. Demographics**

Q9.1. Qual é a tua idade?

- Menos de 18
- 18 a 24
- 25 aa 34
- 35 a 44
- 45 a 54
- 55 a 64
- 65 a 74
- 75 a 84
- Mais de 85

Q9.2. Qual é o teu género?

- Homem
- Mulher
- Não-binário/Outro género

- Prefiro não dizer

Q9.3. Qual é a tua nacionalidade?

- Portuguesa
- Britânica
- Alemã
- Espanhola
- Brasileira
- Francesa
- Italiana
- Outra

Q9.4. Em que país resides neste momento?

- Portugal
- Reino unido
- Alemanha
- Espanha
- Brasil
- França
- Itália
- Outro

Q9.5. Qual é a tua ocupação atual?

- Empregado a tempo inteiro
- Empregado a tempo part-time
- Estudante
- Trabalhador-Estudante
- Desempregado
- Aposentado
- Invalidez
- Outro

## 8.2. Tables

Table 1 - Do you consider yourself a gamer?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	21	6,7	6,7	6,7
	Somewhat disagree	13	4,1	4,1	10,8
	Neither agree nor disagree	20	6,4	6,4	17,2
	Somewhat agree	84	26,8	26,8	43,9
	Strongly agree	176	56,1	<b>56,1</b>	100,0
Total		314	100,0	100,0	

Table 2 - How many hours per week do you spend playing digital games?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 hours	73	23,2	23,2	23,2
	Between 5 and 10 hours	111	35,4	35,4	58,6
	More than 10 hours	130	41,4	41,4	100,0
Total		314	100,0	100,0	

Table 3 - Have you got, or ever had, an access-based gaming subscription?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes, I have one now	130	41,4	<b>57,8</b>	57,8
	Yes, but not anymore	63	20,1	28,0	85,8
	No	32	10,2	14,2	100,0
	Total	225	71,7	100,0	
Missing	System	89	28,3		
Total		314	100,0		

Table 4 - Do you know what access-based gaming subscriptions are?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	203	64,6	<b>90,2</b>	90,2
	More or less	21	6,7	9,3	99,6
	No	1	,3	,4	100,0
	Total	225	71,7	100,0	
Missing	System	89	28,3		
Total		314	100,0		

Table 5 - How old are you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 18	4	1,3	1,8	1,8
	18 - 24	47	15,0	20,9	22,7
	25 - 34	119	37,9	<b>52,9</b>	75,6
	35 - 44	51	16,2	22,7	98,2
	45 - 54	4	1,3	1,8	100,0
	Total	225	71,7	100,0	
	Missing	System	89	28,3	
Total		314	100,0		

Table 6 - What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	192	61,1	<b>86,1</b>	86,1
	Female	30	9,6	13,5	99,6
	Non-binary / third gender	1	,3	,4	100,0
	Total	223	71,0	100,0	
Missing	System	91	29,0		
Total		314	100,0		

Table 7 - What is your current occupation? - Selected Choice

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed full time	144	45,9	64,0	64,0
	Employed part time	5	1,6	2,2	66,2
	Student	43	13,7	19,1	85,3
	Employed and a student	12	3,8	5,3	90,7
	Unemployed	15	4,8	6,7	97,3
	Disabled	1	,3	,4	97,8
	Other	5	1,6	2,2	100,0
	Total	225	71,7	100,0	
	Missing	System	89	28,3	
Total		314	100,0		

Table 8 - Reliability Statistics

Cronbach's Alpha	N of Items
<b>,833</b>	14

Table 9 - Reliability Statistics

Cronbach's Alpha	N of Items
<b>,903</b>	9

Table 10 – Drivers Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Price	225	1	5	3,95	1,101
Number of games	225	1	5	<b>4,25</b>	,903
Discount to buy games	225	1	5	3,85	1,199
Having the games you want	225	1	5	<b>4,06</b>	1,053
Availability of all-new multiplayer games	225	1	5	3,69	1,275
Convenience	225	1	5	<b>4,07</b>	1,018
Essentiality of product	225	1	5	3,22	1,272
Added Value	225	1	5	3,84	1,125
Service quality	225	1	5	<b>4,15</b>	1,028
Usage frequency	225	1	5	<b>4,10</b>	,972
Fairness	225	1	5	3,44	1,105
Reduced Complexity	225	1	5	3,44	1,206
Inspiration	225	1	5	3,18	1,204
Community	225	1	5	3,16	1,273

Table 11 - One-Sample Test Drivers – Teste Value = 3

	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Price	12,901	224	,000	,947	,80	1,09
Number of games	20,825	224	,000	1,253	1,13	1,37
Discount to buy games	10,673	224	,000	,853	,70	1,01
Having the games you want	15,072	224	,000	1,058	,92	1,20
Availability of all-new multiplayer games	8,104	224	,000	,689	,52	,86
Convenience	15,722	224	,000	1,067	,93	1,20
Essentiality of product	2,568	224	,011	,218	,05	,38
Added Value	11,258	224	,000	,844	,70	,99
Service quality	16,791	224	,000	1,151	1,02	1,29
Usage frequency	16,932	224	,000	1,098	,97	1,23
Fairness	5,974	224	,000	,440	,29	,59
Reduced Complexity	5,530	224	,000	,444	,29	,60
Inspiration	2,214	224	,028	,178	,02	,34
Community	1,938	224	,054	,164	,00	,33

Table 13 - Test of Homogeneity of Variances - Drivers

		Levene Statistic	df1	df2	Sig.
Price	Based on Mean	,183	2	222	,833
Number of games	Based on Mean	,103	2	222	,902
Discount to buy games	Based on Mean	1,333	2	222	,266
Having the games you want	Based on Mean	,753	2	222	,472
Availability of all-new multiplayer games	Based on Mean	2,820	2	222	<b>,062</b>
Convenience	Based on Mean	3,151	2	222	<b>,045</b>
Essentiality of product	Based on Mean	2,979	2	222	<b>,053</b>
Added Value	Based on Mean	1,680	2	222	,189
Service quality	Based on Mean	2,074	2	222	,128
Usage frequency	Based on Mean	5,028	2	222	<b>,007</b>
Fairness	Based on Mean	2,097	2	222	,125
Reduced Complexity	Based on Mean	,767	2	222	,466
Inspiration	Based on Mean	,462	2	222	,631
Community	Based on Mean	,901	2	222	,408

Table 14 - Robust Tests of Equality of Means

		Statistic <sup>a</sup>	df1	df2	Sig.
Convenience	Welch	2,328	2	72,702	,105
	Brown-Forsythe	2,325	2	83,721	,104
Usage frequency	Welch	2,735	2	70,304	<b>,072</b>
	Brown-Forsythe	2,516	2	91,003	<b>,086</b>

a. Asymptotically F distributed.

Table 15 – ANOVA Drivers

		Sum of Squares	df	Mean Square	F	Sig.
Price	Between Groups	3,647	2	1,824	1,512	,223
	Within Groups	267,713	222	1,206		
	Total	271,360	224			
Number of games	Between Groups	4,783	2	2,392	2,987	<b>,052</b>
	Within Groups	177,777	222	,801		
	Total	182,560	224			
Discount to buy games	Between Groups	,478	2	,239	,165	,848
	Within Groups	321,682	222	1,449		
	Total	322,160	224			
Having the games you want	Between Groups	2,282	2	1,141	1,030	,359
	Within Groups	245,967	222	1,108		

	Total	248,249	224			
Availability of all-new multiplayer games	Between Groups	7,396	2	3,698	2,301	,103
	Within Groups	356,826	222	1,607		
	Total	364,222	224			
Essentiality of product	Between Groups	9,511	2	4,755	2,992	<b>,052</b>
	Within Groups	352,818	222	1,589		
	Total	362,329	224			
Added Value	Between Groups	4,909	2	2,454	1,955	,144
	Within Groups	278,647	222	1,255		
	Total	283,556	224			
Service quality	Between Groups	3,255	2	1,628	1,547	,215
	Within Groups	233,607	222	1,052		
	Total	236,862	224			
Fairness	Between Groups	1,868	2	,934	,764	,467
	Within Groups	271,572	222	1,223		
	Total	273,440	224			
Reduced Complexity	Between Groups	7,724	2	3,862	2,698	<b>,070</b>
	Within Groups	317,831	222	1,432		
	Total	325,556	224			
Inspiration	Between Groups	7,861	2	3,930	2,752	<b>,066</b>
	Within Groups	317,028	222	1,428		
	Total	324,889	224			
Community	Between Groups	16,189	2	8,094	5,183	<b>,006</b>
	Within Groups	346,727	222	1,562		
	Total	362,916	224			

Table 17 - One-Sample Test Usage Frequency Driver – Test Value =4

	t	df	Test Value = 4			
			Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Usage_Frequency_Driver	3,166	129	<b>,002</b>	,23077	,0866	,3750

Table 18 – Barriers Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
They are difficult to understand	225	1	5	2,14	1,197
They are difficult to access	225	1	5	2,15	1,261
They are difficult to transaction with	225	1	5	2,38	1,348
They are difficult to use	225	1	5	2,01	1,264

They are not consistent	225	1	5	2,75	1,310
They do not have an accurate performance	225	1	5	2,61	1,339
The app is difficult to use	225	1	5	2,18	1,307
They need technical skills to be used	225	1	5	1,91	1,148
The games are divided in different subscriptions	225	1	5	<b>3,24</b>	1,417

Table 20 - Test of Homogeneity of Variances - Barriers

		Levene Statistic	df1	df2	Sig.
They are difficult to understand	Based on Mean	2,017	2	222	,135
They are difficult to access	Based on Mean	,270	2	222	,764
They are difficult to transaction with	Based on Mean	,969	2	222	,381
They are difficult to use	Based on Mean	1,278	2	222	,281
They are not consistent	Based on Mean	,186	2	222	,831
They do not have an accurate performance	Based on Mean	,221	2	222	,802
The app is difficult to use	Based on Mean	1,907	2	222	,151
They need technical skills to be used	Based on Mean	,818	2	222	,442
The games are divided in different subscriptions	Based on Mean	,043	2	222	,958

Table 21 – ANOVA Barriers

		Sum of Squares	df	Mean Square	F	Sig.
They are difficult to understand	Between Groups	4,624	2	2,312	1,624	,199
	Within Groups	316,105	222	1,424		
	Total	320,729	224			
They are difficult to access	Between Groups	5,966	2	2,983	1,891	,153
	Within Groups	350,194	222	1,577		
	Total	356,160	224			
They are difficult to transaction with	Between Groups	5,255	2	2,628	1,452	,236
	Within Groups	401,633	222	1,809		
	Total	406,889	224			
They are difficult to use	Between Groups	9,729	2	4,864	3,101	<b>,047</b>
	Within Groups	348,253	222	1,569		
	Total	357,982	224			
	Between Groups	13,568	2	6,784	4,060	<b>,019</b>

They are not consistent	Within Groups	370,992	222	1,671		
	Total	384,560	224			
They do not have an accurate performance	Between Groups	15,509	2	7,755	4,459	<b>,013</b>
	Within Groups	386,073	222	1,739		
	Total	401,582	224			
The app is difficult to use	Between Groups	12,400	2	6,200	3,715	<b>,026</b>
	Within Groups	370,489	222	1,669		
	Total	382,889	224			
They need technical skills to be used	Between Groups	,354	2	,177	,133	,875
	Within Groups	294,686	222	1,327		
	Total	295,040	224			
The games are divided in different subscriptions	Between Groups	13,097	2	6,549	3,331	<b>,038</b>
	Within Groups	436,458	222	1,966		
	Total	449,556	224			

Table 23 - One-Sample Test Consistent Barrier – Test Value = 3

	t	df	Sig. (2-tailed)	Test Value = 3		
				Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper	
Consistent_Barrier	1,114	31	<b>,274</b>	,25000	-,2079	,7079

Table 24 – Willigness to Pay Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
How much would you be willing to pay for an access-based gaming subscription per month in euros (€)?	225	,00	25,00	<b>7,7987</b>	5,23335	27,388

Table 25 - One-Sample Test Willigness to Pay – Teste Value = 5,52

	t	df	Sig. (2-tailed)	Test Value = 5.52		
				Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper	
How much would you be willing to pay for an access-based gaming subscription per month in euros (€)?	6,531	224	<b>,000</b>	2,27867	1,5911	2,9662

Table 26 - Test of Homogeneity of Variances – Willigness to Pay

		Levene Statistic	df1	df2	Sig.
How much would you be willing to pay for an access-based gaming subscription per month in euros (€)?	Based on Mean	,663	2	222	<b>,516</b>

Table 28 – ANOVA Willigness to Pay

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	135,758	2	67,879	2,512	<b>,083</b>
Within Groups	5999,151	222	27,023		
Total	6134,910	224			

Table 29 - One-Sample Test Has an access-based gaming Subscription – Test Value = 5.52

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Has an access-based gaming subscription	6,597	129	<b>,000</b>	2,84231	1,9898	3,6948

Table 30 - One-Sample Test Had an access-based gaming Subscription before – Test Value = 5.52

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Had an access-based gaming subscription before	3,054	62	<b>,003</b>	1,95778	,6763	3,2392

Table 31 - One-Sample Test Never had an access-based gaming Subscription before – Test Value = 5.52

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Never had an access-based gaming subscription	,546	31	<b>,589</b>	,62063	-1,6965	2,9378

Table 32 - One-Sample Test Never had an access-based gaming Subscription before  
 – Test Value = 3.39

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Never had an access-based gaming subscription	2,421	31	<b>,022</b>	2,75063	,4335	5,0678

Tabela 33 - Drivers Correlations

	Price	Number of games	Discount to buy games	Having the games you want	Availability of all-new multiplayer games	Convenience	Essentially of product	Added Value	Service quality	Usage frequency	Fairness	Reduced Complexity	Inspiration	Community
Price	1	.301**	.008	.288**	.045	.338**	.174**	.505**	.279**	.280**	.185**	.129	.105	.057
Number of games		1	.224**	.327**	.232**	.395**	.189**	.333**	.228**	.000	.301**	.241**	.105	.057
Discount to buy games			1	.180**	.265**	.209**	.311**	.215**	.275**	.292**	.302**	.286**	.374**	.446**
Having the games you want				1	.156**	.188**	.254**	.200**	.334**	.323**	.262**	.203**	.374**	.446**
Availability of all-new multiplayer games					1	.219**	.215**	.106	.162**	.237**	.310**	.263**	.234**	.309**
Convenience						1	.265**	.305**	.379**	.323**	.280**	.263**	.253**	.174**
Essentially of product							1	.283**	.309**	.376**	.383**	.263**	.327**	.422**
Added Value								1	.348**	.344**	.375**	.206**	.225**	.171**
Service quality									1	.356**	.318**	.219**	.256**	.233**
Usage frequency										1	.217**	.203**	.370**	.362**
Fairness											1	.426**	.495**	.361**
Reduced Complexity												1	.370**	.339**
Inspiration													1	.409**
Community														1

\*\* Correlation is significant at the 0.01 level (2-tailed).

\* Correlation is significant at the 0.05 level (2-tailed).

Tabela 34 - Barriers Correlations

	They are difficult to understand	They are difficult to access	They are difficult to transaction with	They are difficult to use	They are not consistent	They do not have an accurate performance	The app is difficult to use	They need technical skills to be used	The games are divided in different subscriptions
They are difficult to understand	Pearson Correlation Sig. (2-tailed)	1 ,649**	,496** ,000	,660** ,000	,575** ,000	,524** ,000	,626** ,000	,621** ,000	,422** ,000
They are difficult to access	Pearson Correlation Sig. (2-tailed)	,649** 1	,543** ,000	,680** ,000	,498** ,000	,579** ,000	,707** ,000	,642** ,000	,402** ,000
They are difficult to transaction with	Pearson Correlation Sig. (2-tailed)	,496** ,000	,543** ,000	1 ,527**	,461** ,000	,478** ,000	,544** ,000	,413** ,000	,295** ,000
They are difficult to use	Pearson Correlation Sig. (2-tailed)	,660** ,000	,680** ,000	,527** 1	,486** ,000	,511** ,000	,653** ,000	,579** ,000	,315** ,000
They are not consistent	Pearson Correlation Sig. (2-tailed)	,575** ,000	,498** ,000	,461** ,000	1 ,486**	,653** ,000	,488** ,000	,412** ,000	,401** ,000
They do not have an accurate performance	Pearson Correlation Sig. (2-tailed)	,524** ,000	,579** ,000	,478** ,000	,511** ,000	1 ,547**	,547** ,000	,450** ,000	,510** ,000
The app is difficult to use	Pearson Correlation Sig. (2-tailed)	,626** ,000	,707** ,000	,544** ,000	,488** ,000	,547** 1	1 ,544**	,544** 1	,391** ,000
They need technical skills to be used	Pearson Correlation Sig. (2-tailed)	,621** ,000	,642** ,000	,413** ,000	,579** ,000	,450** ,000	,544** ,000	1 ,264**	,264** ,000
The games are divided in different subscriptions	Pearson Correlation Sig. (2-tailed)	,422** ,000	,402** ,000	,295** ,000	,315** ,000	,401** ,000	,391** ,000	,264** ,000	1 ,000

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Tabela 35 - KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		<b>,854</b>
Bartlett's Test of Sphericity	Approx. Chi-Square	2028,408
	df	253
	Sig.	,000

Table 36 - Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5,741	24,963	24,963	5,741	24,963	24,963	5,256	22,853	22,853
2	4,088	17,776	42,739	4,088	17,776	42,739	3,344	14,539	37,391
3	1,630	7,088	49,827	1,630	7,088	49,827	2,860	12,436	49,827
4	1,046	4,548	54,375						
5	,981	4,267	58,642						
6	,957	4,162	62,804						
7	,866	3,766	66,570						
8	,765	3,324	69,895						
9	,757	3,293	73,187						
10	,711	3,091	76,278						
11	,666	2,894	79,172						
12	,604	2,625	81,797						
13	,567	2,465	84,262						
14	,515	2,238	86,500						
15	,478	2,080	88,580						
16	,421	1,829	90,409						
17	,409	1,778	92,188						
18	,374	1,627	93,815						
19	,356	1,550	95,365						
20	,323	1,404	96,768						
21	,297	1,290	98,058						
22	,245	1,067	99,125						
23	,201	,875	100,000						

Extraction Method: Principal Component Analysis.

Table 37 - Rotated Component Matrix<sup>a</sup>

	Component		
	1	2	3
Price	,072	-,084	<b>,785</b>
Number of games	-,129	,190	<b>,599</b>
Discount to buy games	-,031	<b>,653</b>	,096
Having the games you want	,104	,252	<b>,467</b>
Availability of all-new multiplayer games	-,099	<b>,473</b>	,118
Convenience	-,170	,207	<b>,621</b>
Essentiality of product	-,036	<b>,580</b>	,272
Added Value	-,090	,151	<b>,702</b>
Service quality	,025	,344	<b>,528</b>
Usage frequency	,102	,406	<b>,464</b>
Fairness	-,028	<b>,612</b>	,330
Reduced Complexity	-,168	<b>,541</b>	,201
Inspiration	-,137	<b>,663</b>	,140
Community	,025	<b>,777</b>	,025
They are difficult to understand	<b>,831</b>	,025	-,069
They are difficult to access	<b>,851</b>	-,049	,020
They are difficult to transaction with	<b>,692</b>	-,036	-,004
They are difficult to use	<b>,818</b>	,034	-,032
They are not consistent	<b>,707</b>	-,151	-,063
They do not have an accurate performance	<b>,746</b>	-,221	-,014
The app is difficult to use	<b>,816</b>	-,079	-,021
They need technical skills to be used	<b>,742</b>	,104	-,085
The games are divided in different subscriptions	<b>,526</b>	-,311	,104

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

a. Rotation converged in 5 iterations.

Table 38 - Final Cluster Centers

	Cluster			
	1	2	3	4
Factor_Barriers	-,25571	-,23359	-,51885	1,59094
Factor_Other_Specific_Drivers	-1,37643	-,11329	,58234	,15692
Factor_Value_For_The_Money	,59722	-1,49147	,36638	,22004

Tabela 39 - Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10,479 <sup>a</sup>	6	<b>,106</b>
Likelihood Ratio	10,757	6	,096
Linear-by-Linear Association	,056	1	,812
N of Valid Cases	225		

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 5,83.

Tabela 40 - Have you got, or ever had, an access-based gaming subscription? \* Cluster Number of Case Crosstabulation

			Cluster Number of Case				Total
			1	2	3	4	
Have you got, or ever had, an access-based gaming subscription?	Yes, I have one now	Count	23	24	63	20	130
		% within Cluster Number of Case	56,1%	52,2%	67,0%	45,5%	57,8%
	Yes, but not anymore	Count	9	15	24	15	63
		% within Cluster Number of Case	22,0%	32,6%	25,5%	34,1%	28,0%
	No	Count	9	7	7	9	32
		% within Cluster Number of Case	22,0%	15,2%	7,4%	20,5%	14,2%
Total	Count	41	46	94	44	225	
	% within Cluster	100,0%	100,0%	100,0%	100,0%	100,0%	
	Number of Case			%			

### 8.3. Graphs

Graph 1 - Scree Plot

